



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

RBEL133M-6503-101
Job Sheet 175824



Part No: RBEL133M-6503-101

Job Qty: 1 ea

DAS
13
9-89

APR 11 2018

Part Name: Mounting Tool



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 4/11/18

Job Tracking No:

Due Date: 5/21/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG RBEGM-745-064 Rev 2 IPP Rev A 18.04.10 new issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Purchasing	1 pcs	5/21/18	5/21/18	0.00	0.00	Purchasing		End 18-05-03
110	Packaging	1 pcs	5/21/18	5/21/18	0.00	0.00	Packaging2		End 18-05-03
120	QC	1 pcs	5/21/18	5/21/18	0.00	0.00	QC6		38
130	Packaging	1 pcs	5/21/18	5/21/18	0.00	0.00	Packaging3		18-05-24 48
140	QC21-FG	1 Ea	5/21/18	5/21/18	0.00	0.00	QC21		21

Part Op 100 - Issue PO to ARROW TECH MACHINE WORKS P/O: 39580 MANUFACTURE RBEL133M-6503-101 AS PER
Descriptions: DWG -Certificate of conformity is required

MAY 09 2018
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Job BOM

Part / Item	Component Name	Quantity	Operation	Container
RBEL133M-6503-101P	Mounting Tool	1 (1 ea)	100-Purchasing	5073713

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Purchasing	RBEL133M-6503-101P	1	0	0

Part Specifications

Specifications could not be found.

Plex 4/11/18 8:13 AM Dart.lajeunesse.marie

3x121
5085



Container No: S073716



Part: RBEL133M-6503-101

Job No: 175824

Serial No/Batch: S073716

Revision: 2

Inspector:

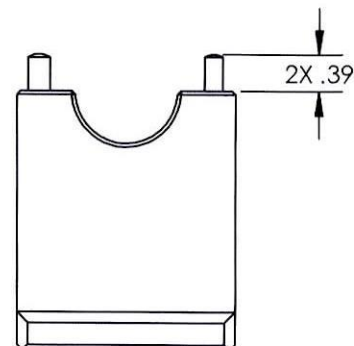
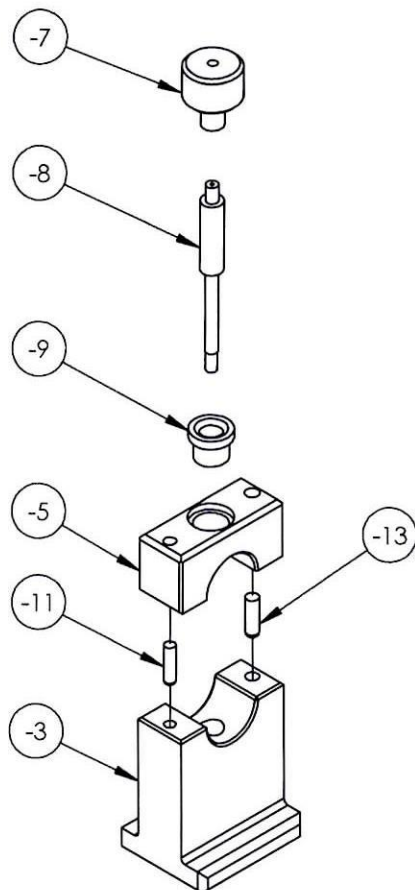
Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 05/23/18

340
62
215

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	16-0138	CH'D TOOL NAME TO MATCH OEM WAS DR MOUNTING TOOL IS MOUNTING TOOL. DELETED DIM .039 SHEET 1. -3 & -5 CH'D MATERIAL WAS 1018 IS A36/1018/1020 HR -3, -5, & -7 CH'D FINISH WAS NICKLE PLATE IS ZINC PLATE. -3 DELETED DIM'S .945, Ø.2366/2361 P.F. -13, Ø.1969/1964 P.F. -11, 2.189, CH'D DIM'S WAS .039 X 45° IS 14X .04 X 45°, WAS R.079 X2 IS 2X R.09, WAS .118 X 45° X2 IS 2X, 12X 45°, WAS .118 X 45° X4 IS 4X .12 X 45°, WAS Ø.258 DEPTH 2.189 IS .26 ±.219, WAS Ø.219 DEPTH 2.189 IS Ø.22 ±.219 (P.F. -11), ADDED DIM 1.890, .492, 1.181. -5 CH'D DIM WAS Ø.590 C.B. Ø.709 DEPTH .069 P.F. -7, IS Ø.5904/.5900 THRU ALL L Ø.760 ±.119 (P.F. -9), WAS .039 X 45° IS .40 X 45°, WAS .079 X 45° 4X IS 4X .08 X 45°, WAS Ø.258 DEPTH .565 IS Ø.26 ±.57 (S.F. -13), WAS Ø.219 ±.565 IS Ø.22 ±.57 (S.F. -11), DELETED DIM .945, ADDED DIM 1.890, 1.181. -7 CH'D DIM WAS Ø.392 S.F. -9 IS Ø.392 +.000/-003 (S.F. -9), WAS Ø1.016 IS Ø1.00, WAS M5X.8 DEPTH .738 IS M5X0.8 ±.74, WAS Ø.211 IS Ø.220 +.005/-000 (S.F. -8), WAS .350 IS .35, WAS .059 X 45° IS 2X .06 X 45°, WAS .674 IS .67, WAS 1.187 IS 1.19. CH'D MATERIAL WAS 1018 IS 1018/1020 CR. -8 ADDED PART & DRAWING.	11/7/2016	RJC	SM

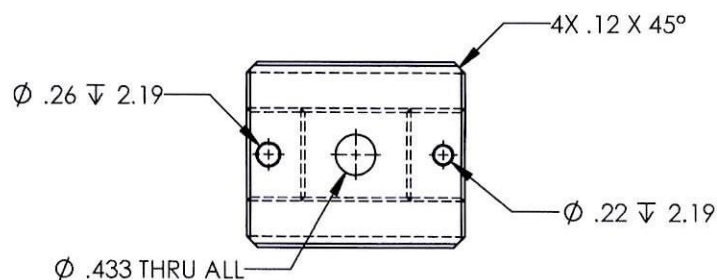
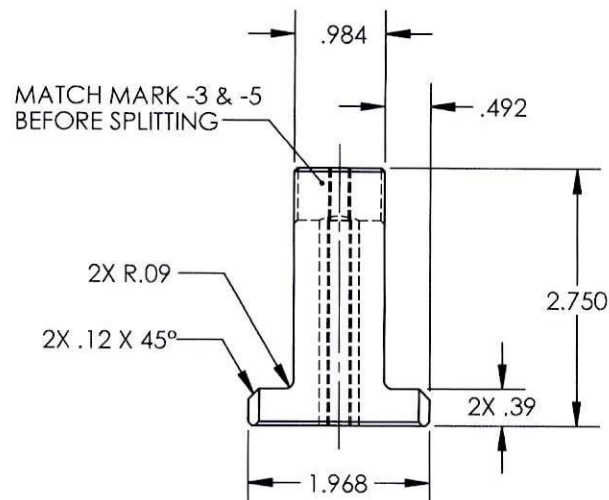
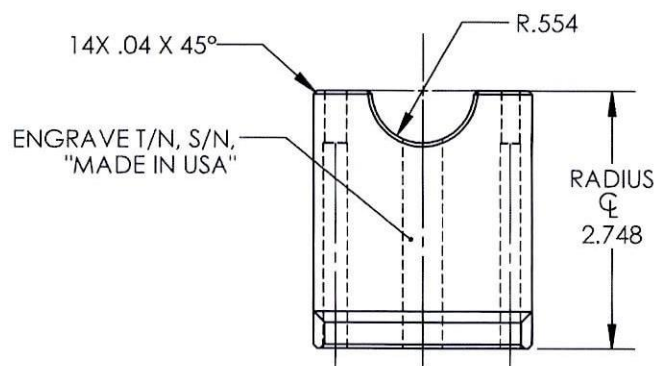
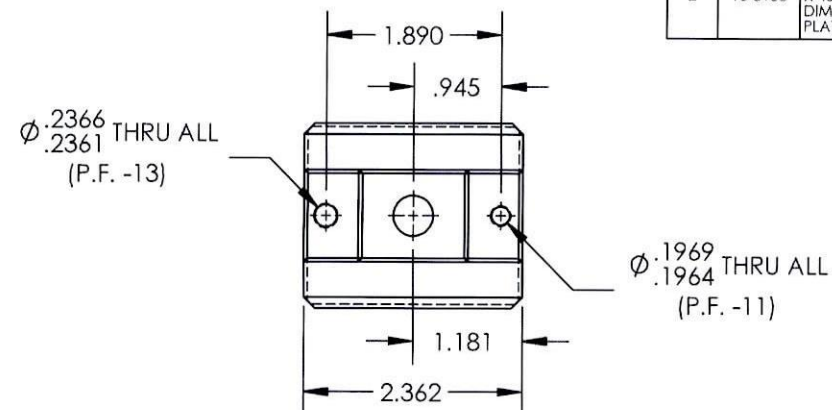


ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	PG.
			-3	1	BASE	A36/1018/1020 HR		2
			-5	1	CAP	A36/1018/1020 HR		3
			-7	1	KNOB	1018/1020 CR		4
			-8	1	BOLT	01		5
		B/O	-9	1	FLANGED BUSHING	STEEL	Ø10mm I.D. X Ø15mm O.D. X 14mm (J.W. WINCO #10M10HDD)	1
		B/O	-11	1	DOWEL PIN	STEEL	Ø5MM X 20mm (MCMASTER-CARR #91595A356)	1
		B/O	-13	1	DOWEL PIN	STEEL	Ø6mm 20mm (MCMASTER-CARR #91595A452)	1

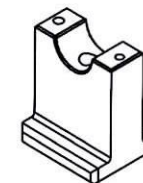
DART AEROSPACE	
TITLE MOUNTING TOOL	
DWG NO. RBEL133M-6503-101	REV 2
MAT'L HEAT TREAT FINISH	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125/✓
SPEC	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
DRAWN BY: CLOUGH	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
CHECKED: DUERFELDT	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
OPPS APPR: ANDERSON	USED ON MODEL
QA APPR: LINDSAY	
APPROVED: MACKOVJAK	EC135
SCALE 1:3	DATE 7/13/2010
SHEET 1 OF 5	

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REVISIONS						
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED	
2	16-0138	-3 DELETED DIM'S .945, Ø.2366/.2361 P.F. -13, Ø.1969/.1964 P.F. -11, 2.189, CH'D DIM'S WAS .039 X 45° IS 14X .04 X 45°, WAS R.079 X2 IS 2X R.09, WAS .118 X 45° X2 IS 2X, 12X 45°, WAS .118 X 45° X4 IS 4X .12 X 45°, WAS Ø.258 DEPTH 2.189 IS .26 ▽ 2.19, WAS Ø.219 DEPTH 2.189 IS Ø.22 ▽ 2.19 (P.F. -11), ADDED DIM 1.890, .492, 1.181, CH'D MATERIAL WAS 1018 IS A36/1018/1020 HR, CH'D FINISH WAS NICKLE PLATE IS ZINC PLATE.	11/7/2016	RJC	SM	



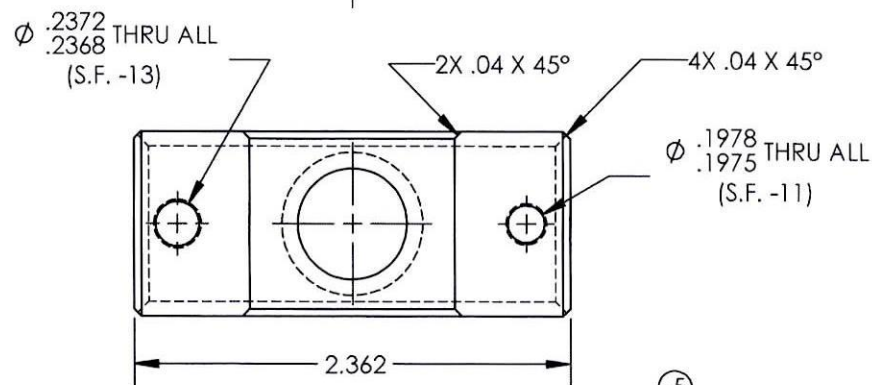
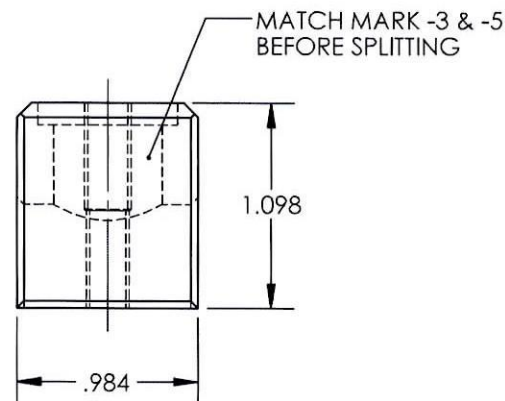
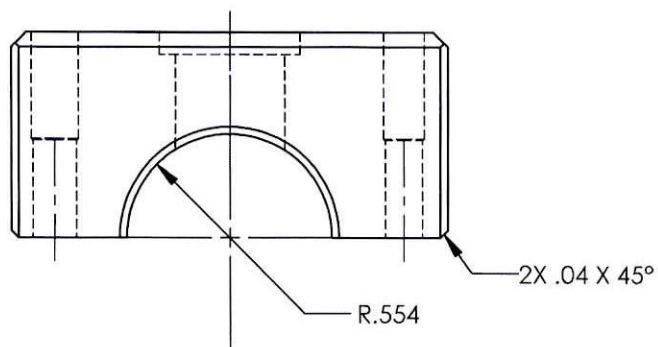
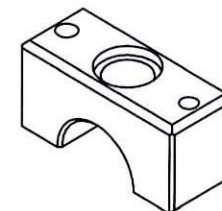
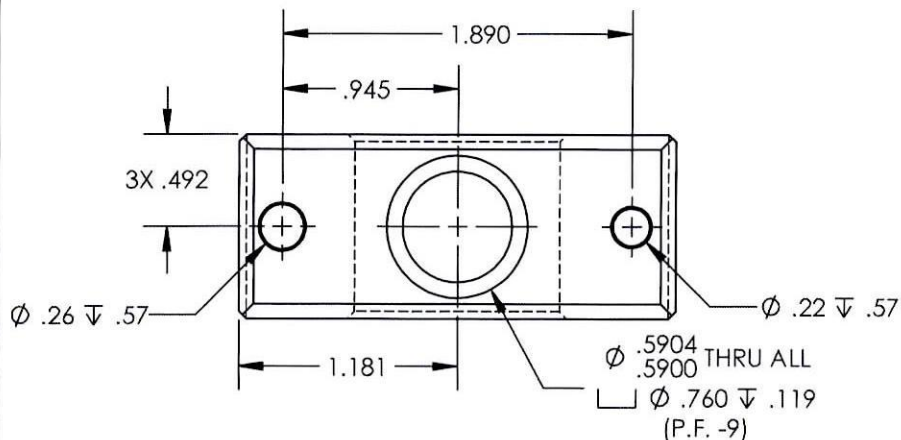
(-3)
BASE



DART AEROSPACE	
TITLE MOUNTING TOOL	
DWG NO. RBEL133M-6503-101-3	REV 2
MAT'L A36/1018/1020 HR	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT ZINC PLATE	.XXX ± .005 FRACTIONS ± 1/8
FINISH ZINC PLATE	.XX ± .01 ANGLES ± 5°
SPEC ASTM B633 TYPE I SC 2	.X ± .1 SURFACES = 125/✓
DRAWN BY: CLOUGH	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: DUERFELDT	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: MACKOVJAK	EC135
SCALE 1:2	DATE 7/13/2010
SHEET 2 OF 5	

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REVISIONS							
REV	ECR	DESCRIPTION			DATE	INITIAL	APPROVED
2	16-0138	-5 CHD DIM WAS Ø.590 C.B. Ø.709 DEPTH .069 P.F. -7, IS Ø.5904/.5900 THRU ALL  Ø.760  .119 (P.F. -9), WAS .039 X 45° IS .40 X 45°, WAS .079 X 45° 4X IS 4X .08 X 45°, WAS Ø.258 DEPTH .565 IS Ø.26  .57 (S.F. -13), WAS Ø.219  .565 IS Ø.22  .57 (S.F. -11), DELETED DIM .945, ADDED DIM 1.890, 1.181, CHD MATERIAL WAS 1018 IS A36/1018/1020 HR, CHD FINISH WAS NICKLE PLATE IS ZINC PLATE.			11/7/2016	RJC	SM

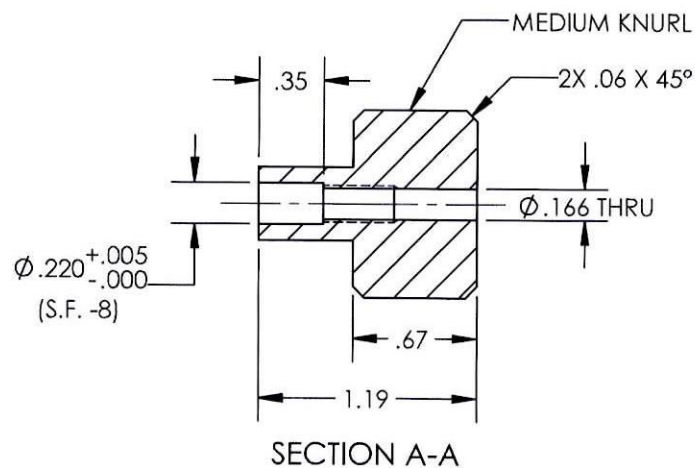
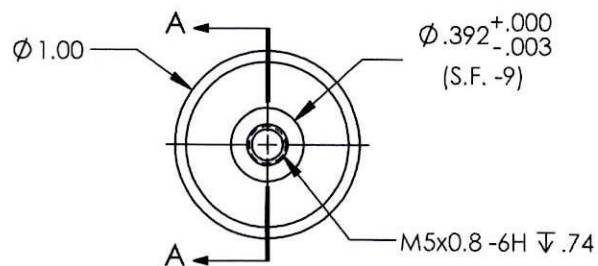


(-5)
CAP

DART AEROSPACE	
TITLE MOUNTING TOOL	
DWG NO. RBEL133M-6503-101-5	REV 2
MAT'L A36/1018/1020 HR	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT ZINC PLATE	.XXX ± .005 FRACTIONS ± 1/8
FINISH ZINC PLATE	.XX ± .01 ANGLES ± 5°
SPEC ASTM B633 TYPE I SC 2	.X ± .1 SURFACES = 125/
DRAWN BY: CLOUGH	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: DUERFELDT	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: MACKOVJAK	EC135
SCALE 1:1	DATE 7/13/2010
SHEET 3 OF 5	

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REVISIONS						
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED	
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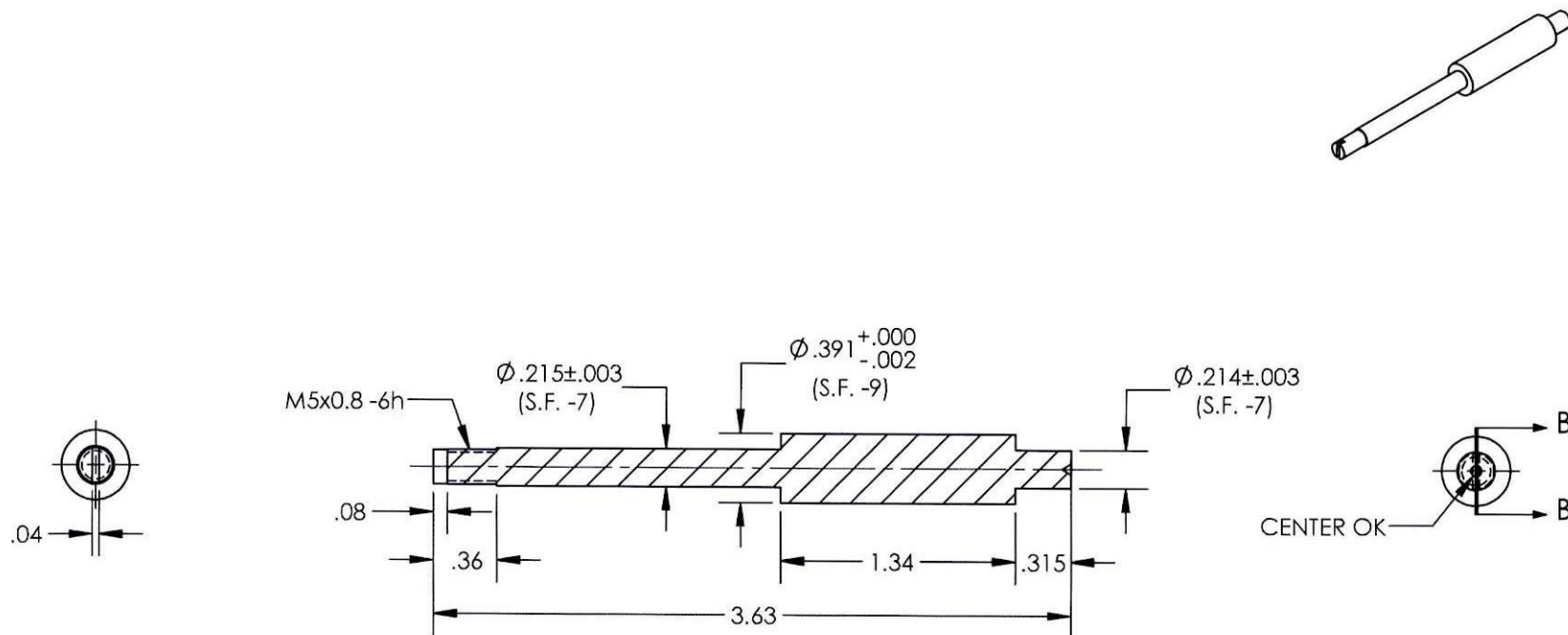


(-7)
KNOB

DART AEROSPACE	
TITLE MOUNTING TOOL	
DWG NO. RBEL133M-6503-101-7	REV 2
MATL 1018/1020 CR	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT	.XXX ± .005 FRACTIONS ± 1/8
FINISH ZINC PLATE	.XX ± .01 ANGLES ± .5°
SPEC ASTM B633 TYPE I SC 2	.X ± .1 SURFACES = 125/√
DRAWN BY: CLOUGH	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: DUERFELDT	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: MACKOVJAK	EC135
SCALE 1:1	DATE 7/13/2010
SHEET 4 OF 5	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	16-0138	-8 ADDED PART & DRAWING.	11/7/2016	RJC	SM



SECTION B-B

(-8)

BOLT

DART AEROSPACE	
TITLE DR MOUNTING TOOL	
DWG NO. RBEL133M-6503-101-8	REV 2
MAT'L 01 HEAT TREAT RC 45-50 FINISH ZINC PLATE SPEC ASTM B633 TYPE I SC 2	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125/✓
DRAWN BY: CLOUGH	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: DUERFELDT	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: MACKOVJAK	EC135
SCALE 1:1	DATE 10/26/2016
SHEET 5 OF 5	



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO039580**

Supplier: ARR002-VU
Arrow Tech Machine Works
29751 E. Enid Road,
Unit C
Eugene, OR 97402 USA
Phone: 541-780-6938
Fax: 458-215-4938

PO No: PO039580
PO Date: 4/11/18
Due Date: 6/2/18
Purchase Order Revision:
Revision Date:
Ship-To Contact: Phone:

REVISED
\$

Ship To:

Pymt Terms: Net 30
Freight Terms:
Special Comments:

Items

Line Item	Part	Supplier Part No	Item No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1	RBEGM-745-064P			Removal/Installation-Motor Pump Cartridge (Forward Main Tank) WO 175829 AND WO 175826	Firmed	5/11/18	2 Ea	0 Ea	2 Ea	\$1,736.93/Ea	\$3,473.86
2	RBW109-3130-85-133P			Tool Kit, Tail Rotor Pitch Control Shaft Bearing Remove/Install WO 175827 AND WO175893	Firmed	5/25/18	2 Ea	0 Ea	2 Ea	\$1,766.68/Ea	\$3,533.36
3	RBEL133M-6503-101P			Mounting Tool	Firmed	5/18/18	2 Ea	0 Ea	2 Ea	\$1,753.73/Ea	\$3,507.46
4	RBD29828P			Elastomeric Bearing Removal Tool WO 175825	Firmed	6/4/18	2 Ea	0 Ea	2 Ea	\$551.91/Ea	\$1,103.82
5	RBW6305G00431-3GP			Hoisting Flange Main Gear Box WO 175830	Firmed	5/29/18	4 pcs	0 pcs	4 pcs	\$1,013.90/pcs	\$4,055.60
6	RBE117-11181W1P			Main Rotor Drive Mounting Tool WO 175881, WO 175882, WO 175883 WO 175885	Firmed	5/11/12	4 Ea	0 Ea	4 Ea	\$2,603.98/Ea	\$10,415.92
7	RBW6305G00132-3GP			AW139 Gimbal Bushing WO 175863, WO 175864, WO 175864	Firmed	5/29/18	3 pcs	0 pcs	3 pcs	\$1,080.39/pcs	\$3,241.17

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5/9/2018

PURCHASE ORDER

Items											
Line Item	Part	Supplier Part No	Item No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
8	RBEM632V1001101P			Main Gear Box.Sling WO 175862 AND WO 175897	Firmed	5/9/18	2 Ea	0 Ea 2x	2 Ea	\$4,164.83/Ea A/18/05/16	\$8,329.66
9	RBT18420P			Wing Pin Puller WO 175858	Firmed	5/25/18	2 Ea	0 Ea	2 Ea	\$1,159.85/Ea	\$2,319.70
Grand Total:										\$39,980.55	

Order Notes

Procurement Quality Clauses

A005 RIGHT OF ENTRY

A008 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION SENT TO DART AEROSPACE)

A012 CHEMICAL AND PHYSICAL TEST REPORTS

A016 PERSONNEL QUALIFICATION

A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)

A026 CERTIFICATION OF MATERIAL CONFORMANCE

A041 QUALITY MANAGEMENT SYSTEM

A042 DART NOTIFICATION BY SUPPLIER

A043 RETENTION OF QUALITY DOCUMENT

A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM

A049 SUPPLIER AWARENESS

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail; please visit www.dartaerospace.com for further explanation.

Plex 5/9/18 11:45 AM dart.lavoie.chantal



ARROW TECH MACHINE WORKS

Certificate of Conformance

Your Purchase Order No:039580

Dated: 5/22/2018/

Our Order / Job No:03AWT

Order Qty:2

Part Name: MOUNTING TOOL

Part Number: RBEL133M-6503-101

Lot Size: N/A Ship Date: 5/22/2018

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We certify that these parts shipped to you are of domestic or international manufacture and conform to all requirements of the Purchase Order. These parts have been manufactured and inspected in accordance with all required specifications, instructions and drawings. Any applicable specifications are listed below:

Drawing Number: RBEL133M-6503-101

Rev:2

Material Size and Type: -3,-5,-7/1018 STEEL; -8/01 STEEL

Material Specifications: STEEL: ASTM A108, ASTM A29; STEEL 01: ASTM A681

Heat Treatment: -8/ ACTUAL RC 48.8-49.1

Plating/Finish: ZINC PLATE: ASTM B633, TYPE I, SC 2

Mercury Contamination: The material used to process this order has not come in contact with mercury or mercury bearing instruments.

Date: 05/22/18

Signed: 

PHGE Machine Works LLC dba Arrow Tech Machine Works
29751 E. Enid Rd. Unit C Eugene, Oregon 97402
Main: (541) 780-6938 | Fax: (458) 215-4938
www.atechmachineworks.com